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REDWOOD RAILROAD TRANSPORTATION COSTS MENDOCINO COUNTY

William Hallin - Assistant Silviculturist
California Forest and Range Experiment Station[1]

Redwood logging costs for Mendocino County were presented in Research Note 20, "Redwood Logging Costs in Mendocino County" California Forest and Range Experiment Station. However, railroad transportation costs were shown only for trucks connected by tongues.

The following costs for ordinary flat cars were prepared subsequently and are presented as a supplement to Research Note 20.

Log costs per dollar of car costs are shown in tables 1 and 2. Tree costs are shown in table 3 and in figure 1.

The index costs are converted into actual costs by multiplying the index values by the ratio between the actual average cost per M and $1.

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[1] Assistance in the preparation of these materials was furnished by the personnel of Works Progress Administration Official Project Number 765-08-3-16.

Table 1.- Redwood transportation costs per \$1 of car[1] costs.
Logs other than butts.

	Log diameter inside bark										
	10	15	20	25	30	35	40	45	50	55	60
					16-foot length						
Cost	.0040	.0180	.0430	.0900	.1460	.2060	.2720	.3390	.3920	.4460	.5040
Volume[2]	50	137	276	449	656	897	1185	1512	1872	2266	2704
Cost per M	.0800	.1314	.1558	.2004	.2226	.2296	.2295	.2242	.2094	.1968	.1864
					20-foot length						
Cost	.0090	.0240	.0580	.1080	.1660	.2300	.2970	.3590	.4120	.4660	.5250
Volume[2]	63	171	345	561	820	1121	1481	1890	2340	2833	3380
Cost per M	.1428	.1404	.1681	.1925	.2024	.2052	.2005	.1899	.1761	.1645	.1553
					24-foot length						
Cost	.0140	.0330	.0740	.1280	.1880	.2520	.3200	.3780	.4290	.4860	.5450
Volume[2]	121	260	491	768	1082	1447	1894	2415	2976	3604	4299
Cost per M	.1157	.1269	.1507	.1667	.1738	.1742	.1690	.1565	.1442	.1348	.1268
					28-foot length						
Cost	.0190	.0440	.0920	.1470	.2090	.2770	.3420	.3960	.4460	.5070	.5660
Volume[2]	140	302	572	896	1263	1688	2209	2818	3472	4204	5016
Cost per M	.1357	.1457	.1608	.1641	.1655	.1641	.1548	.1405	.1284	.1206	.1128
					32-foot length						
Cost	.0240	.0570	.1080	.1650	.2300	.2970	.3580	.4110	.4640	.5240	.5840
Volume[2]	159	345	654	1024	1443	1928	2524	3220	3969	4804	5732
Cost per M	.1509	.1652	.1651	.1611	.1594	.1540	.1418	.1276	.1169	.1091	.1019
					36-foot length						
Cost	.0280	.0640	.1170	.1760	.2400	.3090	.3680	.4190	.4740	.5340	.5940
Volume[2]	181	388	735	1151	1624	2169	2839	3623	4465	5406	6449
Cost per M	.1547	.1649	.1592	.1529	.1478	.1425	.1296	.1156	.1062	.0988	.0921
					40-foot length						
Cost	.0330	.0740	.1280	.1880	.2520	.3200	.3780	.4280	.4860	.5460	.6040
Volume[2]	200	431	818	1279	1804	2410	3154	4026	4961	6006	7166
Cost per M	.1650	.1717	.1565	.1470	.1397	.1328	.1198	.1063	.0980	.0909	.0843

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[1] Flat cars.

[2] Volume gross Spaulding logs 24 feet and larger scaled as two logs.

Table 2.- Redwood transportation costs per $1 of car[1] costs.
Butt logs.

	Log diameter inside bark										
	10	15	20	25	30	35	40	45	50	55	60
					16-foot length						
Cost	.0045	.0202	.0484	.1012	.1642	.2318	.3060	.3814	.4410	.5018	.5670
Volume[2]	50	137	276	449	656	897	1185	1512	1872	2266	2704
Cost per M	.0900	.1474	.1754	.2254	.2503	.2584	.2582	.2522	.2356	.2214	.2097
					20-foot length						
Cost	.0101	.0270	.0652	.1215	.1868	.2588	.3341	.4039	.4635	.5242	.5906
Volume[2]	63	171	345	561	820	1121	1481	1890	2340	2833	3380
Cost per M	.1603	.1579	.1890	.2166	.2278	.2309	.2256	.2137	.1981	.1850	.1747
					24-foot length						
Cost	.0158	.0371	.0832	.1440	.2115	.2835	.3600	.4252	.4826	.5468	.6131
Volume[2]	160	294	526	805	1117	1460	1394	2415	2976	3604	4299
Cost per M	.0988	.1262	.1582	.1789	.1893	.1942	.1901	.1761	.1622	.1517	.1426
					28-foot length						
Cost	.0214	.0495	.1035	.1654	.2351	.3116	.3848	.4455	.5018	.5704	.6368
Volume[2]	186	342	613	939	1303	1703	2209	2797	3472	4204	5016
Cost per M	.1150	.1447	.1688	.1761	.1804	.1830	.1742	.1593	.1445	.1357	,1270
					32-foot length						
Cost	.0270	.0641	.1215	.1856	.2588	.3341	.4028	.4624	.5220	.5895	.6570
Volume[2]	211	390	701	1073	1489	1946	2524	3220	3969	4804	5732
Cost per M	.1280	.1644	.1733	.1730	.1738	.1717	.1596	.1436	.1315	.1227	.1146
					36-foot length						
Cost	.0315	.0720	.1316	.1980	.2700	.3476	.4140	.4714	.5332	.6000	,6682
Volume[2]	240	439	787	1207	1675	2190	2839	3623	4465	5406	6449
Cost per M	.1312	.1640	.1672	.1640	.1612	.1587	.1458	.1301	.1194	.1111	.1036
					40-foot length						
Cost	.0371	.0832	.1440	.2115	.2835	.3600	.4252	.4815	.5468	.6142	.6795
Volume[2]	266	487	876	1341	1861	2432	3154	4026	4961	6006	7166
Cost per M	.1395	.1708	.1644	.1577	.1523	.1480	.1348	.1196	.1102	.1023	.0948

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[1] Flat cars

[2] Volume gross Spaulding logs 24 feet and longer scaled as two logs.

Table 3.- Redwood transportation costs.

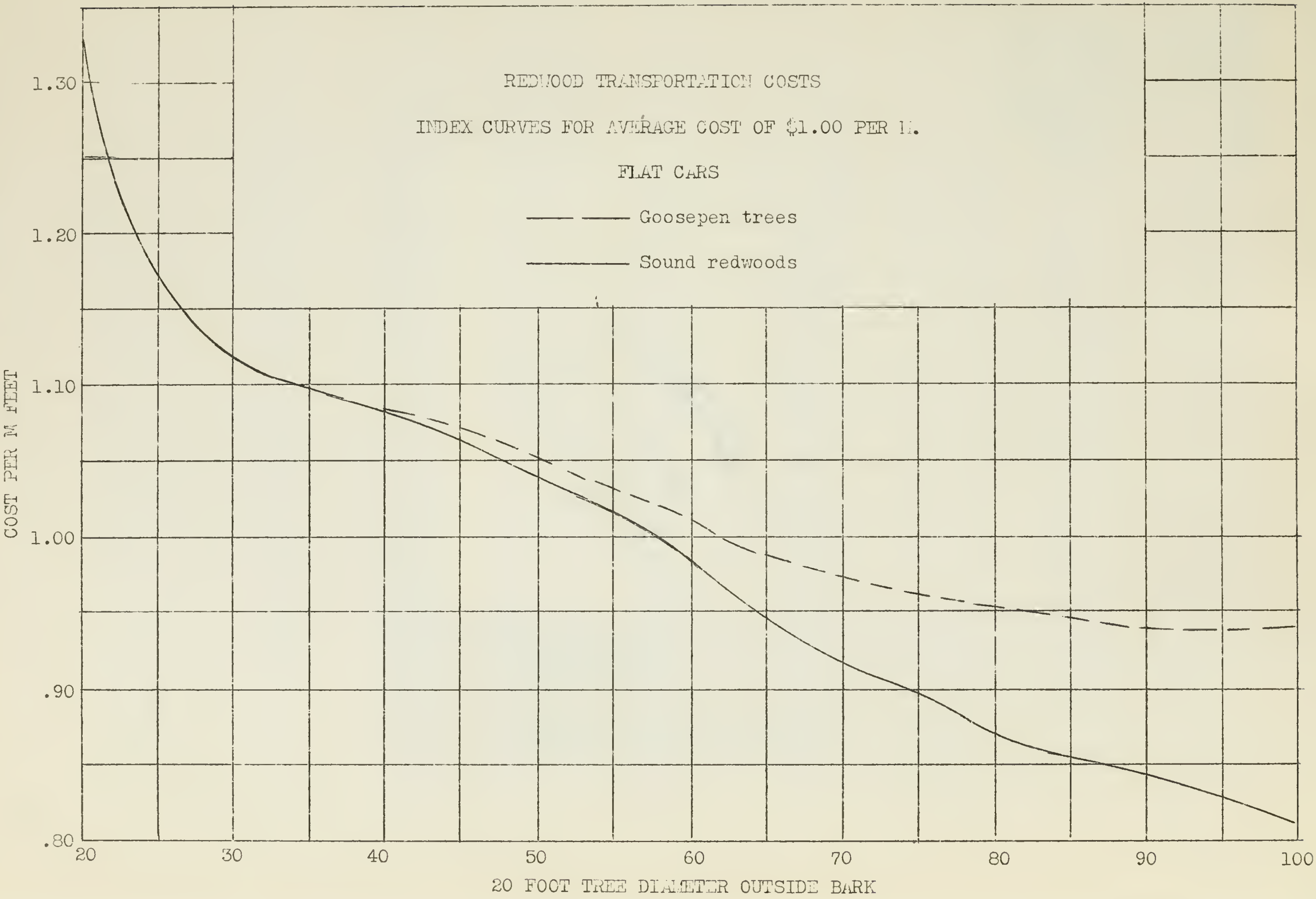
Trees								
	Sound redwood				Goosepen trees			
20-ft. diameter o. b. 1/	Volume gross 2/	Tree cost 3/	Cost per M 3/	Index costs 4/	Volume 2/	Tree cost 3/	Cost per M 3/	Index costs 4
20	190	.039	.205	1.329				
25	700	.127	.181	1.174	700	.127	.181	1.174
30	1380	.237	.172	1.115	1380	.237	.172	1.115
35	2200	.372	.169	1.096	2110	.357	.169	1.096
40	3250	.543	.167	1.083	2890	.483	.167	1.083
45	4590	.751	.164	1.064	3720	.613	.165	1.070
50	6090	.973	.160	1.038	4890	.795	.162	1.050
55	7630	1.201	.157	1.018	6240	.993	.159	1.031
60	9490	1.448	.152	.986	7740	1.205	.156	1.012
65	11810	1.726	.146	.947	9330	1.420	.152	.986
70	14490	2.040	.141	.914	10950	1.640	.150	.973
75	17330	2.388	.138	.895	12620	1.864	.148	.960
80	20450	2.750	.134	.869	14310	2.100	.147	.953
85	23690	3.122	.132	.856	16010	2.339	.146	.947
90	27290	3.545	.130	.843	17750	2.580	.145	.940
95	31300	3.992	.128	.830	19530	2.831	.145	.940
100	35530	4.455	.125	.811	21310	3.085	.145	.940

1/ Diameter 20 feet above the ground on uphill side

2/ Volume gross Spaulding.

3/ Per dollar of car cost

4/ Cost assuming an average cost per M of $1.



REDWOOD TRANSPORTATION COSTS

INDEX CURVES FOR AVERAGE COST OF $1.00 PER M.

FLAT CARS

FIGURE 1

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